

# Oral health awareness among pregnant women in Upper Egypt

Noha M. Ali Abdalla<sup>1</sup>, Ayat M. Omar Masoud<sup>1,2✉</sup>, Ekbal A. Emam<sup>3</sup>, Ahmad S. Abd EL-Male<sup>4</sup>

<sup>1</sup>Nurse Specialist in Technical Institute of Nursing, Faculty of Nursing-Minia University, Egypt / Assist. professor of Maternity and Neonatal Health Nursing, Faculty of Nursing, Fayoum University, Egypt

<sup>2</sup>Assist. professor of Maternity and Neonatal Health Nursing, Faculty of Applied Medical Sciences, Jouf University, Saudi Arabia

<sup>3</sup>Assist. Professor of Maternity Health Nursing, Faculty of Nursing-Minia University, Egypt

<sup>4</sup>Assist. Professor of Obstetrics and Gynecological, Faculty of Medicine, Minia University, Egypt

✉ **Corresponding author:**

Ayat M. Omar Masoud,

Tel. 00966560278929,

Email: amo00@fayoum.edu.eg, ayatalharery@gmail.com, amasoud@ju.edu.sa

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## General Note



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## ABSTRACT

There has recently been increased understanding of the role of maternal oral health and its possible health impacts. This study was conducted during pregnancy to evaluate the awareness of pregnant women regarding oral health. A cross-sectional descriptive research design has been adopted for 300 pregnant women at MCH centers in Minia Area. Significant proportion of pregnant women (69.7%) had poor awareness level regarding oral health. So that health education and promotion activities will be targeted to boost pregnant mothers' information and awareness

**Keywords:** Oral health, Pregnancy, Awareness.

## 1. INTRODUCTION

Pregnancy is a normal process which can cause changes in different parts of the body including the oral cavity. Such improvements can lead to oral illnesses if oral cavity is not treated in proper and timely treatment. Women can experience increased gingivitis or gingivitis starting in the 2<sup>nd</sup> or 3<sup>rd</sup> month of pregnancy, which increases in severity during the pregnancy period. <sup>(1)</sup>

Daily visits to dentistry and routine oral hygiene are essential components of oral health care, an integral part of general health. Poor dental health can affect pregnant women's life quality and well-being by causing pain and discomfort, and by affecting the ability to eat, drink, chew, maintain proper nutrition and communicate. Furthermore, in the last two decades the association between bad oral health and systemic diseases has been increasingly recognized. <sup>(2)</sup>

Offering oral health services to pregnant women, educating and advising them on the prevention and treatment of dental caries is important for women's own oral health to encourage safe oral health habits will minimize the spread of these bacteria from mothers to infants by delaying or preventing the emergence of caries there. For these purposes, it is also important for the health care profession (e.g., dentists, dental hygienists, physicians, nurses, midwives, nurse practitioners, physician assistants) to provide sufficient and timely oral health care to pregnant women, including oral health education. <sup>(3)</sup>

Nursing staff are of utmost importance for patient care in all facets of their wellbeing. They are best suited for screening for dental disease, relating to dental hygiene and encouraging good oral health among pregnant women. <sup>(4)</sup>

Dental professionals will make all appropriate dental care to pregnant women, irrespective of their pregnancy level. Prenatal care provider approval for the routine dental treatment of a healthy patient is not needed. They ought to be prepared and able to provide urgent / acute treatment during pregnancy at any time, as shown by oral conditions. Research has shown a possible link between poor maternal oral health and adverse Pregnancy outcomes such as low birth weight and premature birth. <sup>(5)</sup> optimal oral health and oral disease prevention preserves the health and quality of life of a woman before and during pregnancy, and has the ability to minimize the spread of pathogenic bacteria from mother to infant. <sup>(6)</sup>

### Significance of the Study

Yet many women do not have access to oral health care during pregnancy, despite evidence that poor oral health can adversely impact a pregnant woman and her child's health. <sup>(7)</sup> Oral health care needs to be discussed in a multi-professional strategy and should be incorporated into comprehensive health promotion activities and strategies. <sup>(8)</sup> Better communication from oral care and prenatal care providers, particularly doctors and nurses, is needed. Communication for oral and prenatal care providers should resolve the myths and misconceptions that many women have about oral health during pregnancy. Therefore it is necessary to understand the oral health and actions of pregnant women.

### Study aim

This study conducted to evaluate pregnant women's awareness regarding oral health during pregnancy.

## 2. MATERIAL AND METHODS

### Study design

Across sectional research design was utilized in this study.

### Sample

A purposive sample included 300 pregnant women. This sample detected by using (Epi- info <sup>tm</sup> statistical package; version 6) with 39% proportion of good Knowledge and practice at 95% level of confidence (CI) <sup>(10)</sup>, sample size was estimated to be 300 pregnant women. This study started from July 2016-and ended at December 2016.

### Setting

This study conducted in MCH centers in Minia city which provides services for all pregnant women who are attending MCH centers seeking for antenatal care services either coming from rural and urban areas in El-Minia City.

### Exclusion Criteria

Women with any medical disorders.

### Pilot study

A pilot study was carried out on 10 percent of the overall sample to check the tools for clarification, applicability, viability, then required adjustments were made and the findings were omitted from the analysis.

### Procedure:

#### Collection of data will be based on the following steps:

- An official letter was obtained from the dean of the Faculty of Nursing at El-Minia University to head manager of Minia MCH centers, asking for permission to collect data
- **Interview phase:** during which the aim and nature of study briefly explained through direct personal communication with the participant and formal consent obtained from the participant before inclusion in the study this phase was taken about 15 minutes.
- **Implementation phase:** during which the researcher interviewing each participant to collect data by using interviewing questionnaire, this phase taken about 30 minutes.
- The researcher attended to MCH centers to collect the data per 3 day from 9.00 AM to 1.00 PM each week within average of one hour for each woman.

### Ethical Consideration

- Ethical approval obtained from the College's research and ethics committee.
- The legal authorisation to receive data collection authorisation was obtained by sending an official letter from the responsible authorities of the research setting (MCH centers).
- The researcher received an informed consent from the women after explaining the nature of the study to the participants.
- In terms of data protection, anonymity, voluntary participation and the right to refuse to participate in the study, women were underlined. Participants were provided professional help and advice in case of need.

### Statistical analysis

Data were entered and analyzed by software SPSS version 19 qualitative data presented as frequency distribution, quantitative data as mean and standard deviation, shi square and correlation test were used Grades of correlation: 0.00-0.24(no or week), 0.25-0.49 (faire), 0.50-0.74(moderate),  $\geq 0.75$  (strong) P of less than 0.05 was considered as cutoff for significance.

## 3. RESULTS

Table (1) demonstrated that nearly half (49.7%) of pregnant women aged between 20-29 yrs., less than one third (28.7%) age 30-39yrs. Also more than half of studied women (52%) living in rural area, (77.7%) of them were housewives. More over one third of studied women (33.7%) had secondary school and the majority of them (95.7%) had not enough income.

Table (2): showed that nearly more than three quarter of studied women (77.7%) did not know the importance of oral health, more than half of them had no information regarding methods to care of teeth (53.7%) and the response to Physiological changes that occurs in oral cavity during pregnancy also the majority of pregnant women (82.3%& 88.7%) had no any information related to oral Physiological changes during pregnancy and effect of Periodontal disease on pregnancy and fetal outcome. Ignorance of oral health and teeth, lake of intake of calcium during pregnancy and more intake of sugared and sweaty food were the most common causes of gum disease reported by the women (39.3%, 28.7% and 22.0%) respectively. Moreover; that majority of studied women (76.3%) preferred to receive oral health care knowledge during first trimester of pregnancy.

Table (2): it's obvious from this table the mean  $\pm$  SD of the total score of knowledge of studied women were (4.8 $\pm$ 2.03) with large proportion of them (69.7%) had poor knowledge and about one third of them (30.3%) had good knowledge.

Table (4) and figure (1) showed that the prior information regarding oral health among studied women, demonstrates that the nearly two thirds of the studied women (65%) had no previous knowledge regarding oral health and the most common source of knowledge reported by those who had previous knowledge about oral health (35%) were from dentist followed by TV and journals and nurses (32.3%, 24.3%, and 15%) respectively.

Table (5): illustrated that there is a statistical significance difference between total knowledge score of the pregnant women and their age, level of education and (p=0.007, 0.01 and 0.01) as highly educated women have good knowledge about oral health.

**Table (1): Socio demographic data of the studied women:**

Data	No	%
<b>Age</b>		
Less than 20	58	19.3%
20-29	149	49.7%
30-39	86	28.7%
≥40	7	2.3%
<b>Residence</b>		
Rural	156	52%
Urban	144	48%
<b>Education</b>		
Illiterate	45	15%
Read and write	53	17.7%
Primary	55	18.3%
Secondary	101	33.7%
University and above	46	15.3%
<b>Occupation</b>		
House wife	233	77.7%
employee	67	22.3%
<b>Income</b>		
Enough	13	4.3%
Not enough	287	95.7%
<b>Total</b>	300	100%

**Table (2): knowledge of pregnant women regarding oral health during pregnancy**

Item	Number	percent
<b>Importance of oral health for pregnant women</b>		
Yes	67	22.3%
No	233	77.7%
<b>Oral health care methods</b>		
Yes	139	46.3%
No	161	53.7%
<b>Oral Physiological changes during pregnancy</b>		
yes	53	17.7%
No	247	82.3%
<b>Effect of periodontal disease on pregnancy and fetal out come</b>		
Yes	34	11.3%
No	266	88.7%
<b>causes of gum disease</b>		
A- more intake of sugared and sweaty food	66	22.0%
B- more intake of solid food	16	5.3%
C- ignorance care of oral health and teeth	118	39.3%
D- physiological changes during pregnancy	14	4.7%
E- lake of calcium intake during pregnancy	86	28.7%
<b>Appropriate time of knowledge about oral health during pregnancy?</b>		
1 <sup>st</sup> trimester	229	76.3%
2 <sup>nd</sup> trimester.	55	18.3%
3rd trimester	16	5.3%

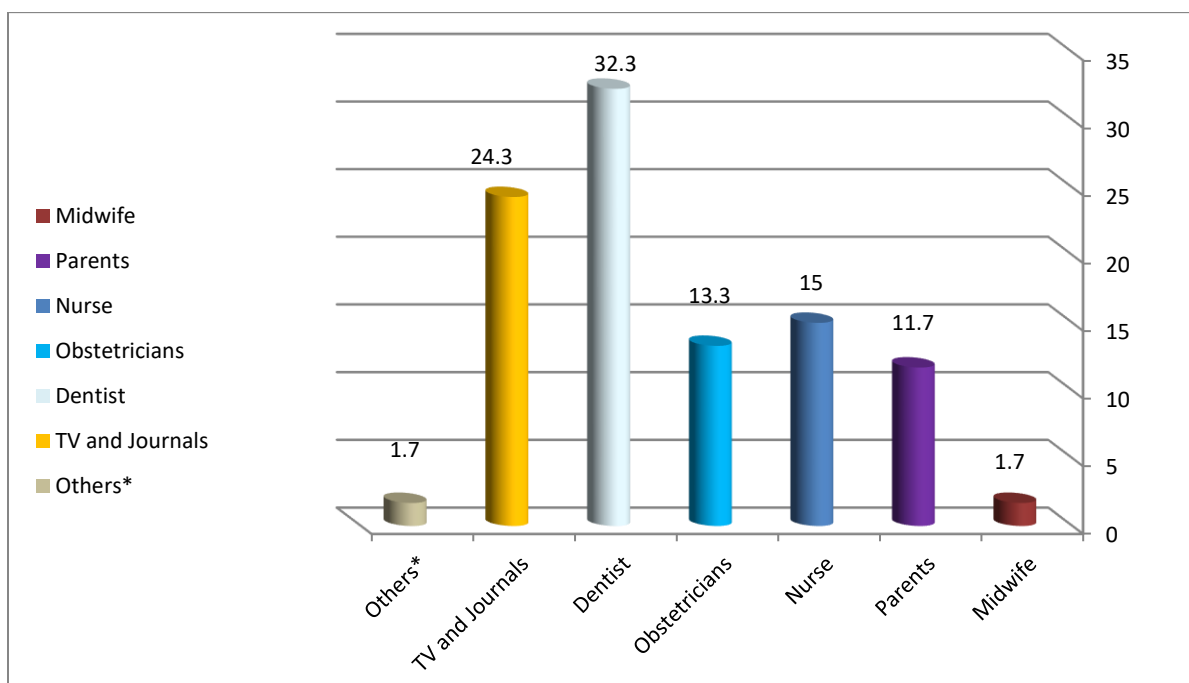
**Table (3): Total score of Knowledge regarding dental health among pregnant women:**

Item	Range	Mean $\pm$ sd	No	%
<b>total score of knowledge</b>				
Good	6-10	7.3 $\pm$ 1.3	91	30.3%
Poor	1-5	3.6 $\pm$ 1.1	209	69.7%
Total	1-10	4.8 $\pm$ 2.03		

**Table (4) prior information regarding oral health among studied women (N=300):**

Item	No	%
<b>Have you got any prior knowledge regarding oral health</b>		
Yes	105	35
No	295	65

\*{(2) No one, (1) my sister and (2) my friends}

**Figure (1): source of information regarding oral health.****Table (5) Correlation between total score of knowledges and socio-demographic data of the studied women (N=300):**

Data	Knowledge score
	r(p)
Age	0.15(0.007*)
Residence	-0.09(0.08)
Education	0.13(0.01*)
Occupation	0.18(0.01*)
Income	0.05(0.3)

\* Statistical significance

## 4. DISCUSSION

Preventing oral and dental problems and their complications during pregnancy is possible by having pregnant women express adequate knowledge, attitude and practice at the right time and seeking dental treatment. Pregnant women need to be informed about the possible effects of periodontal diseases on pregnancy outcomes, prevention of dental disease and treatment options. Studies among

pregnant women with reference to their knowledge regarding oral hygiene and practices toward oral health have been recently reported from other countries. <sup>(11)</sup>

Therefore present study was carried out with the aim to assess pregnant women's awareness regarding oral health and oral health care practices during pregnancy. In such a way, deficiencies in oral health knowledge could be identified and recommendations could be formulated to improve dental education in antenatal care.

Nearly half of pregnant women aged between 20-29 yrs., this may be because of early marriage and early childbearing in our country. And more than half of studied women living in rural area, 77.7% of them were housewives. This result is in line with study done by Talwar, et al 2015 <sup>(12)</sup> who reported in their study regarding oral health status and adverse pregnancy outcomes among pregnant women in Haryana, India: who stated that 87.0% percent of the subjects belong to 20–29 years of age, 82.1% of women were found to be unemployed; and resided at homes only and on the contrary with study done by Sajjan et al 2015<sup>(13)</sup> who evaluated oral Health Related awareness and Practices among pregnant women in bagalkot district, Karnataka, India: who stated that The majority 45.8% of the participants were in the age group of 20-24 years and around 37% were between 25 and 30 years. Nearly half of the participants (46.7%) belonged to the urban area, and 24.1% were from semi urban and 29.1% belonged to the rural area. socioeconomic status showed that the majority of the respondents (53.9%) belonged to upper lower class and 30.4% to upper middle class.

Regarding the knowledge of pregnant women, the findings of the present study confirmed that over three quarters of pregnant women did not know the importance of oral health, more than half of them did not have any information on methods for teeth care. Also, most pregnant women had no knowledge about the reaction to physiological changes that occur in oral cavity during pregnancy.

Contrary to this result, in another study conducted by Byanaku AK et al. (2013) <sup>(14)</sup> who examined pregnant women's oral health; awareness, attitude and practice in antenatal care clinic revealed that most participants agreed that oral health is essential to general health. There for we must increase pregnant women knowledge about oral health by raising awareness of pregnant women about oral and dental health in antenatal care units and effect of pregnancy on oral health and the effect of oral disease on pregnancy and the effect on fetus and encourage them to attending antenatal units to make follow up to their status and ask doctor about their condition and ask them about their oral health.

According to the current study findings ignorance of oral health and teeth, lake of intake of calcium during pregnancy and more intake of sugared and sweaty food were the most common causes of gum disease reported by the women. This was comparable to a report by Abiola et al. (2011) <sup>(15)</sup> in Nigeria that examined A Survey of Pregnant Women's Oral Health Awareness and Practices at the Nigerian Teaching Hospital. Most respondents wrongly selected sugar or sweet foods as the source of periodontal disease. We must also urge pregnant women to take calcium during pregnancy and lactation in order to fulfill the body's calcium needs during this time and encourage women to minimize sweaty food and sugar intake teeth to protect them from rotting of the tooth to enable them to eat nutritious food. In the current analysis the sum mean of  $\pm$ SD score of knowledge of studied Women were (4.8 $\pm$ 2.03) with large proportion of them had poor knowledge and about one third of them had good knowledge. This finding was similar to study done by Ramandeep, et al. (2015)<sup>(16)</sup> found that Knowledge and awareness regarding oral health was found to be low among the study subjects, and contrary with Amit et al. (2014)<sup>(17)</sup> who revealed that most were knowledgeable about dental health.

These findings were also contrary with study done by El-Mahdi Ibrahim et al. (2016) <sup>(18)</sup> who studied Oral health status, knowledge and practice among pregnant women attending Omdurman maternity hospital revealed that Sudanese women. The majority of studied women had average oral health knowledge, but they were unaware of the relationship between oral health and pregnancy. So we can say poor knowledge was due to many factors like as cultural factors and fear from dental care, wrong believe that dental care during pregnancy can affect pregnancy health.

## 5. CONCLUSION

A significant proportion of pregnant women had inadequate awareness level regarding oral health during pregnancy.

**Recommendations:** Designing awareness programs on oral health issues and services through the Ministry of Health to raise women's awareness of these issues especially in Egypt's rural communities.

**Conflict of interest:** The authors declare that there is no conflict of interest.

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**Peer-review:** External peer-review was done through double-blind method.

**Data and materials availability:** All data associated with this study are present in the paper.

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